

the first step of forming an amorphous semiconductor film over a substrate;

the second step of forming a crystalline semiconductor film by crystallizing said amorphous semiconductor film;

the third step of forming an island-shaped crystalline semiconductor layer by patterning said crystalline semiconductor film;

the fourth step of etching the island-shaped crystalline semiconductor layer to remove contaminant impurities on a surface of said crystalline semiconductor layer by applying an etching solution while spinning the substrate; and

the fifth step of forming a gate insulating film in contact with said crystalline semiconductor layer after said fourth step,

wherein said fourth and fifth steps are performed in sequence without being exposed to air.

3. (Twice Amended) A method for manufacturing a semiconductor device comprising:

the first step of forming a base film over a substrate;

the second step of etching the base film to remove contaminant impurities on a surface of said base film by applying an etching solution while spinning the substrate; and

the third step of forming a semiconductor film in contact with said base film after said second step,

wherein said second and third steps are performed in sequence without being exposed to air.

4. (Twice Amended) A method for manufacturing a semiconductor device comprising:

a step of forming a gate insulating film over a substrate;

a step of etching the gate insulating film to remove contaminant impurities on a surface of said gate insulating film by applying an etching solution while spinning the substrate; and

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C1 a step of forming a gate conductive film in contact with said gate insulating film after said contaminant impurities are removed,
D wherein said step of etching the gate insulating film to remove said contaminant impurities and said step of forming said gate conductive film are performed in sequence without being exposed to air.

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C2 13. (Amended) A method for manufacturing a semiconductor device comprising:
forming a semiconductor film over a substrate;
washing a surface of the semiconductor film with pure water in which ozone is dissolved;
etching the surface of the semiconductor film with an acid solution which includes fluorine to remove at least one of B, Na, K, Mg, and Ca by applying the acid solution while spinning the substrate; and
forming a gate insulating film in contact with said semiconductor film.

14. (Amended) A method for manufacturing a semiconductor device comprising:
forming a base film over a substrate;
washing a surface of the base film with pure water in which ozone is dissolved;
D etching the surface of the base film with an acid solution which includes fluorine to remove at least one of B, Na, K, Mg, and Ca by applying the acid solution while spinning the substrate; and
forming a semiconductor film in contact with said base film.

15. (Amended) A method for manufacturing a semiconductor device comprising:
forming a gate insulating film over a substrate;
washing a surface of the gate insulating film with pure water in which ozone is dissolved;

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etching the surface of the gate insulating film with an acid solution which includes fluorine to remove at least one of B, Na, K, Mg, and Ca by applying the acid solution while spinning the substrate; and
forming a gate conductive film in contact with said gate insulating film after said contaminant impurities are removed.
